# CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD CENTRAL VALLEY REGION

ORDER NO.

WASTE DISCHARGE REQUIREMENTS
FOR
SYAR INDUSTRIES, INC.
SYAR MADISON PLANT
YOLO COUNTY

The California Regional Water Quality Control Board, Central Valley Region (hereafter Regional Board), finds that:

- 1. Syar Industries, Inc. submitted a Report of Waste Discharge (RWD) dated 5 July 2005 (with supplemental information received on 17 August and 22 November 2005, and 20 March 2006) to update the existing Waste Discharge Requirements (WDRs) for the Syar Madison Plant aggregate mining and processing facility.
- 2. The Syar Madison Plant is located at 1650 County Road 89 near the town of Madison in Yolo County. The off-channel mining area is located south of Cache Creek and is bordered on the west by County Road 87 and on the east by County Road 89. The facility is in portions of Sections 16, 17, 22, and 23 of T10N, R1W, MDB&M as shown on Attachment A, which is attached hereto and made part of the Order by reference.
- 3. The facility comprises Assessor's Parcel Numbers 049-130-05, 049-130-27, 049-120-06, and 049-120-16. Mining and reclamation will occur on approximately 248 acres. Syar Industries, Inc. (Discharger) owns the land and operates the aggregate processing plant at the facility.
- 4. Order No. 85-185, which prescribed requirements for land discharge of aggregate processing wastewater, was adopted by the Regional Board on 28 June 1985. This Order is no longer adequate because the Discharger requests to designate new excavations as aggregate process wash water ponds. In addition, this Order is neither adequate nor consistent with current plans and policies of the Board, and is therefore being revised to reflect the current operations of the facility.

#### **Sand and Gravel Operations**

- 5. The Discharger operates an aggregate processing plant at which excavated materials are screened, washed, classified and sorted, and stockpiled. The stockpiled materials are subsequently used to produce concrete and asphaltic concrete aggregate, trench backfill, and roadbase material. These materials are loaded onto trucks for off-site delivery.
- 6. The Discharger mines sand and gravel from the historical channel of Cache Creek, and removes silt and clay (approximately 10 percent by volume) during aggregate washing.
- 7. The facility includes former, current, and future gravel pits and extends along the southern bank of Cache Creek.
- 8. The mining and reclamation process (as described in the June 1999 Mining and Reclamation Plan) will consist of mining four areas on approximately 248 acres over a 30 year period. Approximately

one million tons of aggregate will be processed annually by the plant. A summary of the mining areas is as follows:

Mining Area	Acres Mined	Years to Mine	Total Volume of Excavated Material Estimate (Tons) <sup>1</sup>	Saleable Volume of Aggregate Estimate (Tons) <sup>2,</sup>
A-1	16.56	0.9	1,534,716	880,792
A-2	29.27	2.4	4,049,394	2,370,669
B-1	80.01	8.7	15,761,311	8,726,678
B-2	122.03	18	28,794,958	18,019,189

<sup>1</sup> Includes volume of topsoil, overburnden, gross aggregate, and clay waste.

<sup>2</sup> Approximately one-million tons of aggregate is the maximum possible annual production level for the life of the quarry

- 9. The mining areas are located south and west of Cache Creek and west of the material processing areas. Sand and gravel are dredged below the water table from the alluvial deposits in pits using draglines and a yarder. Following removal, loaders deliver the mined material to a conveyor belt where it is transported to a location approximately two miles east of the pit and stockpiled. The stockpiled material is then delivered to the sand plant or the main plant for processing. These plants screen and wash the material to remove silt and clay, and segregate the sand from the gravel. Conveyors within the plants transport the material to various screens and crushers for further segregation and processing. Loaders then transfer the processed materials to stockpiles located throughout the facility where it is used for other processes or loaded onto transportation trucks for delivery off-site. A process schematic of the system is presented as Attachment B, which is attached hereto and made part of this Order by reference.
- 10. A pea gravel plant located southeast of the main plant is used to segregate pea-sized gravel into various sizes. Loaders are used to transport the material to the plant for processing, and conveyors are used to transfer the segregated material to stockpiles located throughout the facility.
- 11. A supply well located on the site supplies makeup water to replace water lost to evaporation or retained in the gravel. This well is not equipped with a flow meter and/or run time meters.
- 12. The RWD states that there are two permanent aggregate process wash water ponds (PWP-1 and PWP-2) located on site. The location of these ponds is shown on Attachment C, which is hereto and made part of this Order by reference. PWP-1 is a used to collect process water from the steam cleaner and the Pea Gravel Plant. PWP-2 is used to collect process water from the sand and main plants, and any storm water runoff in vicinity of the fuel containment area and the former redi-mix plant. The bottoms of the ponds are approximately 5 to 15 feet above the groundwater table. The physical characteristics of the process wash water ponds are as follows:

<u>Parameter</u>	<u>PWP-1</u>	<u>PWP-2</u>
Surface Area (square feet)	1,875	38,000
Approximate Depth (feet bgs)	15	15

<u>Parameter</u>	<u>PWP-1</u>	<u>PWP-2</u>
Volume with 2-feet of freeboard (cubic feet)	15,600	487,500
Volume with 2-feet of freeboard (gallons)	116,688	3,646,500

- 13. Two temporary ponds (PWP-3 [A1] and pond B1) have been created during mining. These ponds are located in mining areas A1 and B1. Locations of the ponds and mining areas are shown in Attachment C. The bottom of PWP-3 (A1) is currently at approximately 24 to 34 feet bgs but has been mined to approximately 50 feet bgs, which is below the groundwater table. PWP-3 (A1) is connected to PWP-2 via a pipeline. The B1 pond has been mined to the water table and process water has never been stored in the pond. In addition to these ponds, a fifth pond (A2) is in the process of being created in mining area A2 and a sixth pond will be created in area B2, a future area to be mined.
- 14. Wash water from the ponds is re-used for washing operations. The peak volume of wash water recirculated between the aggregate processing plant and the process wash water ponds is between 2,000 and 2,500 gallons per minute (gpm). Approximately 3,200 tons of aggregate is processed per eight hour shift. The Discharger typically operates two eight hour shifts per week day during the months of May through October, and one shift per week day the remainder of the year.
- 15. The Discharger has completed a water balance for the facility that demonstrates that there is adequate storage capacity available for a monthly average discharge to the process wash water ponds (PWP-1, 2, and 3) of up to 1.8 million gallons per day (mgpd) during the peak processing months (May through October) and 348 million gallons annually. The water balance was prepared using average daily inflows to the ponds, total pond capacities, pond percolation, local evaporation rates, and the local 100-year total annual precipitation rates, with the ponds maintaining at least two feet of freeboard at all times.
- 16. The RWD indicates that there are no chemical additives used in the mining or processing operations. No polymers or flocculants are used in the ponds.
- 17. Twice annually since the year 2000, the Discharger has sampled the wash water in PWP-2 and PWP-3 for several constituents. A summary of select results are as follows:

### Wastewater Pond Concentrations, Minimum-Maximum Range

Constituents	<u>Units</u>	PWP-2	<u>PWP-3</u>	Water Quality Limit <sup>1</sup>
pН	pH Units	8.2 - 8.67	8.4 - 8.6	6.5 - 8.4
TDS	mg/L	230 - 430	270 - 330	450
Specific Conductance	$\mu$ mhos/cm	500 - 720	470 -550	900
Sodium	mg/L	44 - 57	39 - 47	69
Magnesium	mg/L	27 - 40	25 - 32	NA
Chloride	mg/L	42 - 110	39 - 60	106
Sulfate as SO4	mg/L	27 - 39	26 - 36	250
Nitrate as Nitrate	mg/L	3.3 - 26	<2.0 – 9.6	45

Constituents	<u>Units</u>	<u>PWP-2</u>	<u>PWP-3</u>	Water Quality <u>Limit<sup>1</sup></u>
Total Coliform	MPN/100 mL	13 ->1,600	2.0 - 900	<2.2
Fecal Coliform	MPN/100 mL	<2.0 - 500	<2.0 - 900	< 2.2
Aluminum	mg/L	< 0.050 - 0.620	< 0.050 - 0.360	0.2
Arsenic	mg/L	< 0.005	< 0.0050	0.000004
Barium	mg/L	0.078 - 0.170	0.080 - 0.120	0.001
Cadmium	mg/L	< 0.010	< 0.010	0.00007
Chromium	mg/L	< 0.010	< 0.010	0.05
Copper	mg/L	< 0.010	< 0.010	0.17
Iron	mg/L	< 0.010 - 0.73	< 0.10 - 0.49	0.3
Mercury	mg/L	< 0.00020	< 0.00020	0.0012
Manganese	mg/L	< 0.020 - 0.170	< 0.020 - 0.048	0.05
Lead	mg/L	< 0.0050	< 0.0050	0.002
Selenium	mg/L	< 0.0050	< 0.0050	0.02
Zinc	mg/L	< 0.020	< 0.020	2
Turbidity	NTU	< 0.50 - 9.3	3.6 - 24	NA

NA Not applicable

Note: Total petroleum hydrocarbons, benzene, toluene, ethylbenzene, and xylenes are reported below their respective detection limits. Pesticides and herbicides were also reported below their detection limits.

- 18. These constituents are generally below their respective water quality limits for the protection of beneficial uses with notable exceptions of total and fecal coliform. As human waste is completely isolated from process wash water, the coliform present in the aggregate wash water ponds is most likely due to the presence of the wildlife (ducks, etc.) that have open access to the ponds.
- 19. The RWD states that once the temporary ponds have been reclaimed, they will be returned to agricultural use. Water from these ponds will be used to irrigate nearby crops during the summer months.
- 20. Silts and other fines are removed from the each of the processing ponds on a periodic basis via dredging and are dewatered before use as reclaimed sediments in the mined areas.

#### **Groundwater Conditions**

- 21. The previous WDRs did not require groundwater monitoring, but the Discharger has been monitoring groundwater quality at the site since 1996. The groundwater monitoring program was established as a California Environmental Quality Act (CEQA) mitigation measure by Yolo County as part of the mining permit requirements to detect any groundwater quality degradation associated with mining activities.
- 22. The RWD states that there are 22 wells on the property. Of these, 14 are used for irrigation, four are industrial, three are abandoned, and one is used for domestic purposes. In addition, 11 groundwater monitoring wells are located along the southern boundary of Cache Creek near process wash water Ponds No. 2 and 3. The irrigation and industrial water supply wells are completed between 65 and 210 feet bgs and the monitoring wells are completed to depths between 55 and 70

<sup>&</sup>lt; Detected below the reporting limit

<sup>&</sup>lt;sup>1</sup> Or the natural background concentration in groundwater, whichever is higher

- feet bgs, in the first hydrostratigraphic zone. The monitoring wells are typically completed with 30 to 40 feet of screen. Locations of the groundwater monitoring wells are shown on Attachment C.
- 23. Several groundwater monitoring wells (MW-3, MW-9, MW-10, MW-11) have been sampled annually since 1996 by Yolo County. The RWD states that MW-2, MW-4, and MW-6 will be added to the annual sampling program. Water levels during the summer months range from approximately 30 to 40 feet bgs and from approximately 23 to 25 feet bgs during the winter months. Groundwater gradient is generally to the east-southeast with MW-3 being the well most upgradient of the mining areas.
- 24. A summary of select groundwater monitoring results are as follows:

# **Groundwater Concentrations, Minimum-Maximum Range**

Constituents	<u>Units</u>	Upgradient MW-3	Downgradient MW-9	Downgradient MW-10	Downgradient <u>MW-11</u>	Water Quality <u>Limit<sup>1</sup></u>
pН	pH Units	7.6 - 7.9	7.5 - 8.1	7.3 - 7.6	7.5 - 8.2	6.5 - 8.4
TDS	mg/L	250 - 350	300 - 440	310 - 500	380 - 470	450
Specific	μmhos/cm	470 - 580	540 - 750	510 - 780	610 - 880	900
Conductance	•					
Sodium	mg/L	36 - 43	45 - 89	46 - 58	51 - 56	69
Chloride	mg/L	29 - 100	40 - 140	44 - 95	41 - 70	106
Sulfate as SO4	mg/L	21 - 30	24 - 89	27 - 66	29 - 41	250
Nitrate as Nitrate	mg/L	< 2.0 - 4.1	4.6 - 70	8.1 - 46	23 - 59	45
Total Coliform	MPN/100 mL	<2.0 - 8	< 2.0 - 2.0	< 2.0	< 2.0 - 4.0	< 2.2
Fecal Coliform	MPN/100 mL	< 2.0 - 4.0	< 2.0	<2.0	< 2.0	< 2.2
Aluminum	mg/L	< 0.050 - 1.8	< 0.050 - 0.19	< 0.050 - 0.44	< 0.050 - 1.3	0.2
Arsenic	mg/L	< 0.005	< 0.005	< 0.050	< 0.005	0.000004
Barium	mg/L	0.1 - 0.15	0.094 - 0.170	0.12 - 0.19	0.170 - 0.24	0.001
Cadmium	mg/L	< 0.010	< 0.010	< 0.010	< 0.010	0.00007
Chromium	mg/L	< 0.010	< 0.010 - 0.011	< 0.010 - 0.012	< 0.010 - 0.014	0.05
Copper	mg/L	< 0.010	< 0.010	< 0.010	< 0.010	0.17
Iron	mg/L	< 0.10 - 2.3	< 0.10 - 0.24	< 0.1 - 0.54	< 0.10 – 1.6	0.3
Mercury	mg/L	< 0.0002	< 0.00020	< 0.00020	< 0.0002	0.0012
Manganese	mg/L	< 0.020 - 0.046	< 0.020	< 0.02	< 0.020	0.05
Lead	mg/L	< 0.0050	< 0.005	< 0.0050	< 0.0050	0.002
Selenium	mg/L	< 0.0050 - 0.0078	< 0.005 - 0.0064	< 0.0050 - 0.0072	< 0.0050	0.02
Zinc	_ mg/L	< 0.020031	< 0.020 - 0.067	< 0.020 - 0.032	< 0.020 - 0.027	2

NA Not applicable

Note: Total petroleum hydrocarbons, benzene, toluene, ethylbenzene, and xylenes are reported below their respective detection limits. Pesticides and herbicides were also reported below their detection limits.

25. Based on these data, groundwater concentrations of TDS and nitrate in downgradient monitoring wells are greater than those in the upgradient well and sometimes exceed the applicable water quality limit for the protection of beneficial uses. However, the nitrate concentrations may be due to neighboring agricultural land uses. The increase in TDS may reflect natural variation in

<sup>&</sup>lt; Detected below the reporting limit

<sup>&</sup>lt;sup>1</sup> Or the natural background concentration in groundwater, whichever is higher

constituent concentrations and/or contribution of soluble salts from adjacent agricultural land. Additionally, the site is adjacent to Cache Creek, which contributes high quality recharge to the aquifer. Further study is required to determine background groundwater quality. The elevated coliform organisms reported in the aggregate wash water appears to be adequately filtered by the aquifer materials surrounding the wash water settling ponds.

#### **Site-Specific Conditions**

- 26. Soils beneath the facility consist of unconsolidated alluvium and the Tehama Formation. The alluvium is estimated at approximately 100 to 150 feet thick beneath the site. The alluvium consists primarily of Cache Creek stream channel deposits and is underlain by the Tehama Formation at depths to approximately 400 feet below ground surface.
- 27. The average annual precipitation in the vicinity of the facility is approximately 17.4 inches with most occurring between November and March. Storm water runoff at the Syar Madison Plant drains towards mined areas, including processing plant areas. All storm water is retained on-site and percolates or evaporates.
- 28. The Discharger operates an asphalt plant, which produces asphaltic concrete by combining proportions of aggregate mixture and imported hot oil in a high temperature process. Asphalt oil used in the manufacturing process is delivered onsite in tanker trucks and is stored in heated storage tanks. The asphalt hot mix is then discharged into trucks or stored in heated tanks. No process water is generated from the plant. The plant includes a dryer and a bag house, two 30,000 gallon asphalt tanks, and a 250 gallon heat transfer oil tank.
- 29. The RWD states that a redi-mix concrete plant south of the main plant has not been in operation since 1989, and that there are no plans to operate this plant in the near future.
- 30. The facility includes a fueling area located east of the asphalt plant. This area is used for fueling vehicles and mobile equipment, as well as storage for hazardous materials. In addition, this fueling area contains two containment areas. One containment area includes a 15,000 gallon offroad diesel tank, a 1,500 gallon gasoline tank and a waste material storage area. The other containment area includes two 8,000 gallon offroad diesel tanks, a 500 gallon on road diesel tank and a 1,000 gallon waste oil tank. All of the tanks are aboveground in concrete secondary containment structures used to contain 110 percent of the largest tank rating. Petroleum and waste products are stored in steel drums within each of the containment areas.
- 31. The RWD states that the facility, including the reclamation areas, are within the 100 year flood plain. This Order requires the Discharger to provide a workplan describing measures that will be taken to protect the wash water settling ponds from inundation from floods with a 100-year frequency, and implement those measures.
- 32. Domestic wastewater disposal at the facility consists of a septic tank/leachfield system, which is regulated by Yolo County Environmental Health Department.

## Basin Plan, Beneficial Uses, and Regulatory Considerations

- 33. The Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition, (hereafter Basin Plan) designates beneficial uses, establishes water quality objectives, contains implementation plans and policies for protecting waters of the basin, and incorporates by reference plans and policies adopted by the State Water Resources Control Board (State Board). Pursuant to Section 13263(a) of the California Water Code, waste discharge requirements must implement the Basin Plan.
- 34. Surface water drainage in the vicinity of the facility is to Cache Creek. The Basin Plan designates the beneficial uses of Cache Creek as municipal and domestic supply; agricultural supply; industrial supply; water contact recreation; non-contact water recreation; warm freshwater habitat; cold freshwater habitat; spawning, reproduction, and/or early development; and wildlife habitat.
- 35. The Basin Plan designates the beneficial uses of underlying groundwater as municipal and domestic, industrial, and agricultural supply.
- 36. State Board Resolution No. 68-16 does not allow degradation of groundwater quality unless it has been shown that:
  - a. The degradation is consistent with the maximum benefit to the people of the State;
  - b. The degradation will not unreasonably affect present and anticipated future beneficial uses;
  - c. The degradation does not cause exceedance of one or more water quality objectives; and
  - d. The discharger employs best practicable treatment and control of the discharge to minimize degradation..
- 37. The Regional Board has considered anti-degradation pursuant to State Board Resolution No. 68-16, and finds that the Discharger has not provided the required demonstration to be allowed to cause groundwater degradation. Therefore, none is authorized.
- 38. The Discharger's waste characterization and groundwater monitoring data indicate that the discharge has little potential to degrade groundwater with various inorganic constituents, depending upon the effectiveness of attenuation. However, the existing groundwater monitoring data are not sufficient to allow determination of background groundwater quality or detect potential groundwater degradation. Based on the available data, it is possible that degradation of groundwater will occur from evapoconcentration and natural geochemical processes associated with exposure of groundwater to the atmosphere. It is therefore appropriate to require that the Discharger formally determine background groundwater quality and evaluate whether any of the waste constituents discharged have degraded, or have the potential to degrade, groundwater quality.
- 39. Section 13267(b) of California Water Code states that: "In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of discharging, or who proposes to discharge within its region, or any citizen or domiciliary, or political agency or entity of this state who has discharged, discharges, or is suspected of discharging, or who proposes to discharge waste outside of its region that could affect

the quality of the waters of the state within its region shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs of these reports, shall bear a reasonable relationship to the need for the reports and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports."

- 40. The monitoring and reporting program required by this Order and the attached Monitoring and Reporting Program No. \_\_\_\_\_, are necessary to assure compliance with these waste discharge requirements. The Discharger operates the facility that discharges the waste subject to this Order.
- 41. The action to update WDRs for this existing facility is exempt from the provisions of the California Environmental Quality Act (CEQA), in accordance Title 14, California Code of Regulations (CCR), Section 15301.
- 42. The Discharger has obtained coverage under the State Board's Water Quality Order No. 97-03-DWQ National Pollutant Discharge Elimination System (NPDES), General Permit No. CAS 000001, Waste Discharge Requirements (WDRs) for Discharges of Storm Water Associated with Industrial Activities.
- 44. The Discharger will continue to implement the 16 February 1999 Madison Plant Off-Channel Mining and Reclamation Plan to comply with Section 272 of the Surface Mining and Reclamation Act.
- 45. This discharge is exempt from the requirements of *Consolidated Regulations for Treatment*, *Storage*, *Processing*, *or Disposal of Solid Waste*, as set forth in Title 27, CCR, Division 2, Subdivision 1, Section 20005, et seq., (hereafter Title 27). The exemption pursuant to Section 20090(b), is based on the following:
  - a. The Regional Board is issuing these waste discharge requirements, which implement the Basin Plan;
  - b. The Discharger will comply with these waste discharge requirements; and
  - c. The wastewater does not need to be managed according to Title 22 CCR, Division 4.5, and Chapter 11, as a hazardous waste.
- 46. Pursuant to California Water Code Section 13263(g), discharge is a privilege, not a right, and adoption of this Order does not create a vested right to continue the discharge.

#### **Public Notice**

47. All the above and the supplemental information and details in the attached Information Sheet, which is incorporated by reference herein, were considered in establishing the following conditions of discharge.

- 48. The Discharger and interested agencies and persons have been notified of the intent to prescribe waste discharge requirements for this discharge, and they have been provided an opportunity for a public hearing and an opportunity to submit their written views and recommendations.
- 49. All comments pertaining to the discharge were heard and considered in a public meeting.

**IT IS HEREBY ORDERED** that Order No. 85-185 is rescinded and that, pursuant to Sections 13263 and 13267 of the California Water Code, Syar Industries, Inc. and its agents, successors, and assigns, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, shall comply with the following:

[Note: Other prohibitions, conditions, definitions, and methods of determining compliance are contained in the attached "Standard Provisions and Reporting Requirements for Waste Discharge Requirements" dated 1 March 1991.].

## A. Discharge Prohibitions:

- 1. The discharge of wastes or pollutants to surface waters or surface water drainage courses is prohibited.
- 2. The discharge of domestic waste, asphaltic concrete waste, concrete waste, or concrete wash water to any process wastewater settling pond is prohibited.
- 3. Discharge of waste classified as hazardous, as defined in Sections 2521(a) of Title 23, CCR, Division 3, Chapter 15, Section 2510, et seq., (hereafter Chapter 15), or 'designated', as defined in Section 13173 of the California Water Code, is prohibited.
- 4. Use of chemical gold recovery techniques (including amalgamation, cyanide leaching, or any other chemical method) is prohibited.
- 5. The discharge of industrial waste to septic systems is prohibited.
- 6. The operation of a concrete batch plant is prohibited until the Discharger has obtained coverage for such discharge under a separate Regional Board adopted Order.
- 7. The generation of any process wastewater at the asphalt plant is prohibited.

### **B.** Discharge Specifications:

1. The monthly average flow of aggregate wash water to the process wash water ponds shall not exceed 1.8 million gallons per day during the months of May through October. Total annual flows shall not exceed 348 million gallons. If the Discharger wishes to increase the monthly average flow then the Discharger shall submit the technical report required by Provision E.2.1 of this Order. Upon approval by the Executive Officer, flow to the process wash water ponds may be increased.

- 2. Water or process wastewater, if used for dust control or onsite irrigation, shall be used in a manner that will not cause eroded soil or sedimentation in runoff to be discharged to areas not controlled by the Discharger.
- 3. The storage and discharge of process wastewater shall remain within the property boundaries at all times as shown on Attachment C. Additional process water ponds may be constructed within the property boundaries.
- 4. The Discharger shall operate all systems and equipment to optimize the quality of the discharge.
- 5. Neither the treatment nor the discharge shall cause a condition of pollution or nuisance as defined by the California Water Code, Section 13050.
- 6. The ponds shall be managed to prevent breeding of mosquitoes. In particular:
  - a. An erosion control program should assure that small coves and irregularities are not created around the perimeter of the water surface.
  - b. Weeds shall be minimized through control of water depth, harvesting, or herbicides.
  - c. Dead algae, vegetation, and debris shall not accumulate on the water surface.
- 7. Objectionable odors originating at this facility shall not be perceivable beyond the limits of the wastewater treatment and disposal areas.
- 8. The wastewater system shall be designed, constructed, operated, and maintained to prevent inundation or washout due to floods with a 100-year return frequency.
- 9. All stockpiled sediments, wastes and products shall be managed to prevent erosion of sediment to surface water drainage courses.
- 10. Newly constructed or rehabilitated levees or berms that hold back water shall be designed and constructed under the direct supervision of a California Registered Civil Engineer or Certified Engineering Geologist.
- 11. The freeboard in each wastewater pond shall never be less than two feet as measured vertically from the water surface to the lowest point of overflow along the pond berm.
- 12. The wastewater ponds shall have sufficient capacity to accommodate allowable wastewater flow and design seasonal precipitation and ancillary inflow and infiltration during the wet season. Design seasonal precipitation shall be based on total annual precipitation using a return period of 100 years, distributed monthly in accordance with historical rainfall patterns.

- 13. Before **1 October** of each year, available pond storage capacity shall at least equal the volume necessary to comply with Discharge Specification Nos. 11 and 12.
- 14. Storm water discharges at the site shall comply with the regulations contained in the State Water Board's Water Quality Order No. 97-03-DWQ National Pollutant Discharge Elimination System (NPDES), General Permit No. CAS000001, Waste Discharge Requirements for Discharges to Storm Water Associated with Industrial Activities (excluding construction activities).
- 15. Before **15 October** of each year, all necessary runoff diversion channels and culverts shall be in a condition to transport waters originating outside the quarry.
- 16. The Discharger shall comply with all applicable sections of the Aboveground Petroleum Storage Tank Regulations (Section 25270, Health and Safety Code).

#### **C.** Effluent Limitations:

Discharge of wash water or any process wastewater to the aggregate wash water pond in excess of the following limits is prohibited:

Constituent or Parameter	<u>Limit</u>		
рН	6.5-8.4 Standard Units		

#### **D.** Groundwater Limitations:

The discharge shall not cause underlying groundwater to contain waste constituents in concentrations statistically greater than natural background water quality.

#### E. Provisions:

- 1. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code sections 6735, 7835, and 7835.1. As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.
- 2. The following reports shall be submitted pursuant to Section 13267 of the California Water Code and shall be prepared as described in Provision E.1:

a.	By 1 September 2006, the Discharger shall submit a report and map defining all
	sampling locations and freeboard measuring points required by Monitoring and
	Reporting Program No

- b. By **1 September 2006**, the Discharger shall submit a workplan describing measures that will be taken to protect the existing process wash water ponds (PWP-1, 2, and 3) from inundation from floods within a 100-year return frequency.
- c. By **1 September 2006**, the Discharger shall submit a *Groundwater Sampling and Analysis Plan* (SAP) that describes detailed instructions and procedures for proper purging and sampling of monitoring wells; equipment decontamination; sample handling, storage and shipment; and completing the chain of custody. The SAP shall include items in the first section of Attachment D, which is attached hereto and made part of this Order by reference.
- d. By 1 September 2006, the Discharger shall submit a Flow Measurement Verification Report. If the Discharger elects to report flows based on pump run times, then the report shall completely document the calibration of effluent and recycling system pumps, correlate actual flows to pump run time estimates generated from the manufacturer's pump curves, and provide a calculation correction (as appropriate) to be applied to convert from pump run time to gallons for each system. Calibration test data, manufacturer's pump curves, and calculations shall be included in the report. Alternatively, the report may document the installation of flow meter(s).
- e. By **1 November 2006**, the Discharger shall submit an Operations and Maintenance Plan, including (a) notification procedures and actions to be taken when the wastewater in the ponds fail to meet specified requirements for freeboard or pH, or create a condition of pollution or nuisance, (b) weed abatement measures and vector control practices, and (c) a berm inspection and maintenance program. This plan shall also describe the procedures that will be implemented during the event of an unauthorized discharge to surface water or surface water drainage courses.
- f. By 1 August 2007, the Discharger shall submit a report evaluating the existing monitoring wells (MWs) 3, 9, 10, and 11 and whether they are located such that they adequately monitor the groundwater conditions upgradient and downgradient of the process wash water ponds. This evaluation shall be made following four quarterly groundwater monitoring events (third quarter 2006 through second quarter 2007). Additional water level measurements may be collected as desired to verify the flow direction. If the existing wells are not placed such that they are upgradient and downgradient of the process wash water ponds, then by this date the Discharger shall also submit a *Monitoring Well Installation Workplan*. The workplan shall propose sufficient additional wells (existing or new) to meet the above requirement, and shall contain the information listed in the first section of Attachment D.
- g. By **1 September 2007**, the Discharger shall submit a report documenting that flood protection measures have been completed according to the approved workplan.
- h. If the report required by Provision E.1.f found that additional monitoring well(s) were necessary, then by **1 December 2007**, the Discharger shall submit a

Monitoring Well Installation Report containing the information listed in the second section of Attachment D.

- i. By **1 December 2009**, the Discharger shall submit a *Background Groundwater Quality Study Report*. For each groundwater monitoring parameter/constituent identified in the MRP, the report shall present a summary of monitoring data, calculation of the concentration in background monitoring wells, and comparison of background groundwater quality to that in wells used to monitor the facility. Determination of background quality shall be made using the methods described in Title 27, Section 20415(e)(10), and shall be based on data from at least eight consecutive quarterly groundwater monitoring events.
- j. If, as a result of the monitoring conducted by MRP No. \_\_\_\_\_\_, mercury is detected at concentrations equal to or greater than 50 nanograms per liter (ng/L) in any process wash water pond, then within **90 days** the Discharger shall submit a workplan to characterize mercury in the water and sediment within the designated areas. Within **120 days** of approval by the Executive Officer of the workplan the Discharger shall submit a report describing the results. If such report demonstrates the presence of mercury at concentrations that may cause bioaccumulation as a result of the final reclamation of the site, then within 120 days, the Discharger shall submit a report evaluating alternatives to reduce mercury to acceptable levels.

If a water quality objective different than 50 ng/L is promulgated, then this permit may be reopened and staff may reevaluate the need for characterization of mercury concentrations in the water and sediment within the designated disposal areas.

- k. At least **180 days** prior to operation of a concrete batch plant, the Discharger shall submit a RWD for coverage under a Site Specific Order.
- 1. At least **90 days prior** to the Discharger's proposal to increase the monthly average flow to the process wash water ponds, the Discharger shall submit a technical report, including a water balance that demonstrates adequate containment and pumping capacity for proposed flows, design seasonal precipitation, and inflow and infiltration using the 100-year return period total annual precipitation. The technical report must be approved by the Executive Officer prior to increasing the flows.
- 3. The Discharger shall comply with the Monitoring and Reporting Program No. \_\_\_\_\_, which is a part of this Order, and any revisions thereto as ordered by the Executive Officer.
- 4. The Discharger shall comply with the "Standard Provisions and Reporting Requirements for Waste Discharge Requirements", dated 1 March 1991, which are attached hereto and by reference a part of this Order. This attachment and its individual paragraphs are commonly referenced as "Standard Provision(s).

- 5. The Discharger shall submit to the Regional Board on or before each compliance report due date the specified document, or if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is reported, then the Discharger shall state the reasons for noncompliance and shall provide a schedule to come into compliance.
- 6. The Discharger shall report promptly to the Regional Board any material change or proposed change in the character, location, or volume of the discharge.
- 7. In the event of any change in control or ownership of the facility or land application areas, the Discharger must notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office. To assume operation as Discharger under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the state of incorporation if a corporation, the name and address and telephone number of the persons responsible for contact with the Regional Board, and a statement. The statement shall comply with the signatory paragraph of Standard Provision B.3 and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements a violation of the California Water Code. Transfer shall be approved or disapproved by the Executive Officer.
- 8. The Discharger shall comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Violations may result in enforcement action, including Regional Board or court orders requiring corrective action or imposing civil monetary liability, or in revision or rescission of this Order.
- 9. A copy of this Order shall be kept at the discharge facility for reference by operating personnel. Key operating personnel shall be familiar with its contents.
- 10. The Regional Board will review this Order periodically and may revise requirements when necessary.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correc
copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley
Region, on

PAMELA C. CREEDON, Executive Officer

GJC:9-Jun-06